WHAT IS CLAIMED IS:

1. A variable-resistance element comprising a resistor and a sliding contact that slides on a surface of the resistor, the resistor comprising:

a first resistor layer comprising carbon black and a first reinforcing material dispersed in a binder resin; and

a second resistor layer comprising carbon black and a second reinforcing material dispersed in a binder resin, the second reinforcing material having a smaller average particle size than the first reinforcing material,

wherein the second resistor layer is disposed on the first resistor layer.

2. The variable-resistance element according to claim 1, wherein the average particle size of the second reinforcing material is not less than 0.1 μm but less than 1 μm.

3. The variable-resistance element according to claim 2, wherein the second reinforcing material comprises spherical particles.

4. The variable-resistance element according to claim 1, wherein the content of the second reinforcing material in the second resistor layer is 5 to 30 percent by volume.

5. The variable-resistance element according to claim 1, wherein the average particle size of the first reinforcing

material is in the range of 1 to 10 μm.

6. The variable-resistance element according to claim 5, wherein the first reinforcing material comprises pulverized carbon fibers.